

LISTING OF THE CLAIMS (1-7)

Claim 1 (currently amended): A method of manufacturing a flash memory Electrically-Erasable Programmable Read Only Memory (EEPROM) device having a lightly-doped source region near the critical gate region and a heavily-doped source region away from the critical gate region wherein the lateral diffusion of the source dopants is decreased and having low Vss resistance, and wherein the EEPROM includes a multitude of field effect transistor memory cells each having a source, drain, a floating gate, a control gate and a substrate, the method comprising:

- (a) forming multiple gates on a substrate defining drain regions and source regions associated with each of the multiple gates;
- (b) forming a first source mask exposing the source regions and portions of the gates;
- c) implanting the exposed source regions with n dopant ions;
- d) removing the first source mask;
- e) forming a second mask exposing a portion of the source regions;
- f) implanting the exposed portions of the source region with  $n^+$  dopant ions; and
- g) removing the second source mask.

~~wherein the edge of the first source mask does not coincide with a (SGE) stacked gate edge adjacent the shared source regions.~~

Claim 2 (original): The method of Claim 1 further comprising annealing the device.

Claim 3 (original): The method of Claim 1 wherein step (c) is accomplished by implanting n dopant ions at a low dosage and at low energy.

Claim 4 (currently amended): The method of Claim 1 wherein step (f) is accomplished by implanting n dopant ions at a high dosage and at high energy.

Claim 5 (currently amended): A method of manufacturing a flash memory Electrically-Erasable Programmable Read Only Memory (EEPROM) device having a lightly-doped source region near the critical gate region and a heavily-doped source region away from the critical gate region wherein the lateral diffusion of the source dopants is decreased and having low Vss resistance, and wherein the EEPROM includes a multitude of field effect transistor memory cells each having a source, drain, a floating gate, a control gate and a substrate, the method comprising:

(a) forming multiple gates on a substrate defining drain regions and source regions associated with each of the multiple gates;

(b) forming a source mask exposing portions of the source regions;

(c) implanting the exposed portions of the source regions with n<sup>+</sup> dopant ions; and

(d) removing the source mask~~±~~.

~~wherein the edge of the first source mask does not coincide with a (SGE) stacked gate edge adjacent the shared source regions.~~

Claim 6 (original): The method of Claim 5 further comprising annealing the device.

Claim 7 (original): The method of Claim 5 wherein step (c) is accomplished by implanting n dopant ions at a high dosage and at high energy.